Coaxial

Voltage Controlled Oscillator

ZX95-505+

5V Tuning for PLL IC's 470 to 505 MHz

Features

- linear tuning characteristics
- low phase noise
- low pushing
- low pulling
- 0.5-5V tuning voltage range
- protected by US patent 6,790,049

Applications

- r & d
- lab
- instrumentation
- PLL circuitry
- wireless microphones

CASE STYLE: GB956

Connectors	Model
SMA	ZX95-505-S+

+RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

Electrical Specifications

MODEL NO.	FREQ. (MHz)		POWER OUTPUT (dBm)	PHASE NOISE dBc/Hz SSB at offset frequencies,KHz Typ.				TUNING VOLTAGE RANGE (V)		SENSI-TIVITY (MHz/V)	PORT CAP (pF)	3 dB MODULATION BANDWIDTH (MHz)	NON HARMONIC SPURIOUS (dBc)	HARMONICS (dBc)		PULLING pk-pk @12 dBr (MHz)	PUSHING (MHz/V)	DC OPERATING POWER	
																		Vcc (volts)	Current (mA)
	Min.	Max.	Typ.	1	10	100	1000	Min.	Max.	Typ.	Typ.	Typ.	Typ.	Typ.	Max.	Typ.	Typ.		Max.
ZX95-505+	470	505	+0.5	-89	-114	-135	-154	0.5	5	11-13	70	80	-90	-21	-13	0.2	0.3	5	17

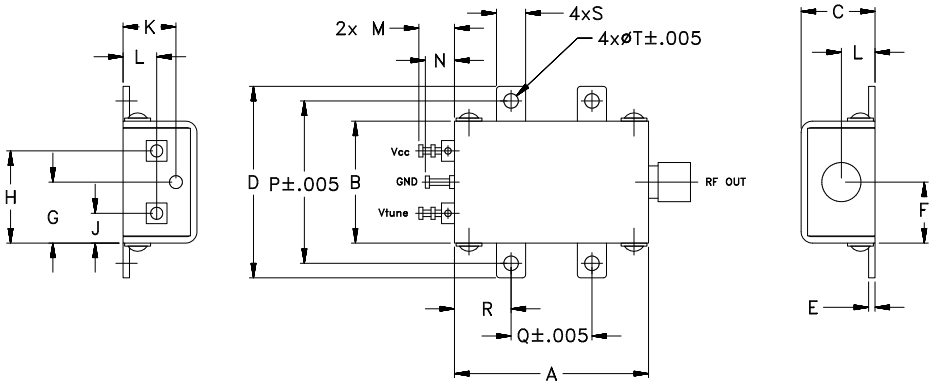
Maximum Ratings

Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	7V
Absolute Max. Tuning Voltage (Vtune)	7V
All specifications	50 ohm system

Permanent damage may occur if any of these limits are exceeded.

NOTE: When soldering the DC connections, caution must be used to avoid overheating the DC terminals. See Application Note AN-40-10 .

Outline Drawing



Outline Dimensions (inch / mm)

A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	wt.
1.20	**.75**	**.46**	**1.18**	**.04**	**.38**	**.38**	**.57**	**.18**	**.33**	**.21**	**.22**	**.18**	**1.00**	**.50**	**.35**	**.18**	**.106**	grams
30.48	19.05	11.68	29.97	1.02	9.65	9.65	14.48	4.57	8.38	5.33	5.59	4.57	25.40	12.70	8.89	4.57	2.69	35.0

Notes

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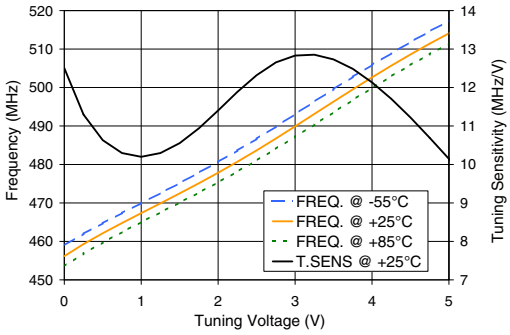
Performance Data & Curves*

ZX95-505+

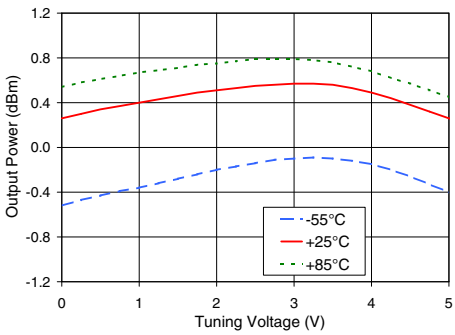
V TUNE	TUNE SENS (MHz/V)	FREQUENCY (MHz)			POWER OUTPUT (dBm)			Icc (mA)	HARMONICS (dBc)			FREQ. PUSH (MHz/V)	FREQ. PULL (MHz)	PHASE NOISE (dBc/Hz) at offsets				FREQ OFFSET (KHz)	PHASE NOISE at 488 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	12.51	459.0	456.2	453.6	-0.52	0.26	0.54	11.80	-20.4	-33.2	-36.0	0.02	0.26	-92.8	-115.3	-135.3	-153.5	1.0	-90.92
0.50	10.63	464.7	462.1	459.7	-0.43	0.34	0.61	11.84	-20.5	-33.0	-36.0	0.13	0.23	-92.4	-115.5	-135.4	-153.0	2.0	-97.00
0.75	10.30	467.4	464.8	462.4	-0.39	0.37	0.64	11.85	-20.6	-32.9	-36.0	0.17	0.21	-93.0	-114.8	-135.1	-152.5	3.5	-104.67
1.00	10.20	470.0	467.4	465.0	-0.36	0.40	0.67	11.87	-20.7	-32.8	-36.0	0.20	0.20	-92.3	-114.6	-135.6	-152.1	6.0	-110.09
1.25	10.30	472.5	469.9	467.5	-0.32	0.43	0.69	11.88	-20.8	-32.7	-36.1	0.22	0.19	-93.2	-114.7	-135.3	-154.2	8.5	-112.12
1.50	10.55	475.2	472.5	470.1	-0.28	0.46	0.71	11.90	-20.8	-32.5	-36.3	0.25	0.18	-91.7	-114.5	-135.2	-151.5	10.0	-113.64
1.75	10.94	477.9	475.1	472.7	-0.24	0.49	0.74	11.91	-20.8	-32.4	-36.4	0.28	0.19	-91.2	-114.3	-134.7	-152.9	20.8	-120.27
2.00	11.40	480.7	477.9	475.4	-0.20	0.51	0.75	11.93	-20.8	-32.3	-36.8	0.29	0.20	-90.3	-114.2	-134.7	-150.5	35.5	-125.80
2.25	11.89	483.6	480.7	478.1	-0.17	0.53	0.77	11.94	-20.9	-32.0	-37.0	0.30	0.21	-89.5	-114.3	-134.8	-153.8	60.7	-130.43
2.50	12.32	486.7	483.7	481.1	-0.14	0.55	0.79	11.95	-21.0	-31.6	-37.2	0.29	0.22	-89.2	-113.7	-135.0	-153.5	86.7	-133.14
2.75	12.65	489.9	486.8	484.1	-0.11	0.56	0.79	11.95	-21.1	-31.2	-37.7	0.24	0.23	-89.9	-113.7	-134.6	-154.8	100.0	-134.63
3.00	12.83	493.1	489.9	487.2	-0.10	0.57	0.79	11.96	-21.3	-31.1	-38.3	0.17	0.23	-89.5	-113.3	-134.5	-152.0	148.1	-138.31
3.25	12.85	496.3	493.1	490.4	-0.09	0.57	0.78	11.96	-21.3	-30.9	-38.9	0.08	0.23	-88.5	-113.7	-134.7	-152.3	177.0	-139.53
3.50	12.73	499.6	496.3	493.6	-0.10	0.56	0.76	11.95	-21.2	-30.6	-39.4	0.03	0.22	-87.9	-113.9	-134.2	-153.1	211.6	-141.52
3.75	12.49	502.8	499.5	496.8	-0.12	0.53	0.72	11.95	-21.2	-30.2	-39.9	0.13	0.23	-86.7	-113.8	-134.3	-151.9	302.4	-143.72
4.00	12.13	505.9	502.6	499.9	-0.15	0.49	0.68	11.94	-21.2	-30.0	-40.2	0.22	0.25	-86.1	-113.3	-134.0	-152.6	361.5	-145.79
4.25	11.71	508.9	505.7	502.9	-0.20	0.44	0.62	11.93	-21.4	-30.1	-40.5	0.28	0.26	-87.3	-113.1	-133.5	-151.0	507.5	-148.70
4.50	11.22	511.8	508.6	505.9	-0.26	0.38	0.57	11.92	-21.6	-30.0	-40.4	0.31	0.26	-88.3	-111.7	-133.7	-151.4	606.7	-150.28
4.75	10.69	514.6	511.4	508.7	-0.33	0.32	0.51	11.91	-21.7	-29.9	-40.6	0.32	0.27	-88.4	-111.8	-133.4	-152.3	851.6	-151.83
5.00	10.15	517.3	514.1	511.4	-0.40	0.26	0.45	11.91	-21.7	-29.9	-40.2	0.31	0.27	-89.7	-112.2	-133.5	-151.6	1000.0	-151.75

*at 25°C unless mentioned otherwise

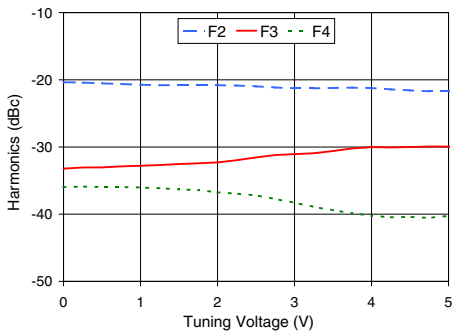
ZX95-505+
Frequency and Tuning Sensitivity



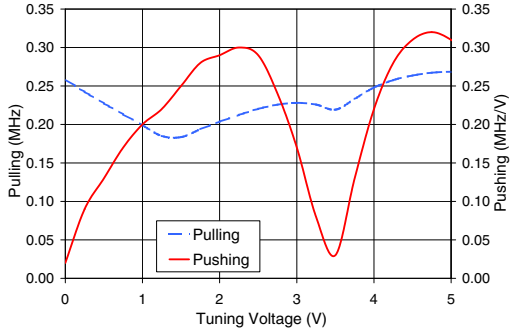
ZX95-505+
Power Output



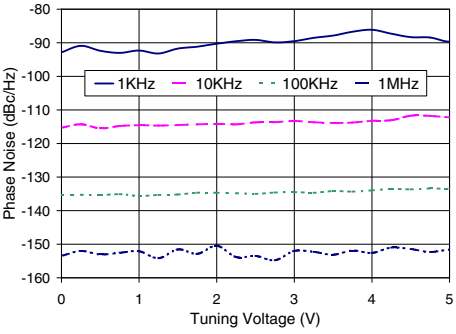
ZX95-505+
Harmonics Level



ZX95-505+
Frequency Pulling & Pushing (Vcc ± 5%)



ZX95-505+
Phase Noise Vs. Tuning Voltage



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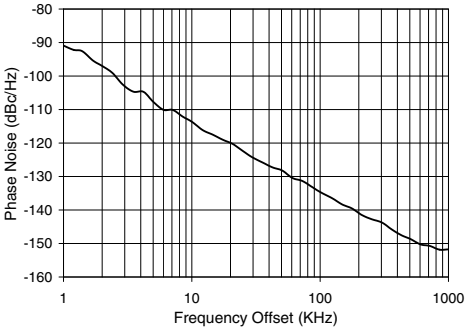
Phase Noise



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